

a glass core including:

an inner core having a first refractive-index difference;

a first layer radially surrounding the inner core along the length of the fiber and having a second refractive-index difference of less than zero;

a second layer radially surrounding the first layer along the length of the fiber and having a third refractive-index difference;

a third layer radially surrounding and adjacent to the second layer along the length of the fiber and having a fourth refractive-index difference of greater than zero;

a glass cladding surrounding the glass core and having a refractive-index difference substantially equal to zero,

wherein said second layer has a width in the range 1-5 μm and said third refractive-index difference is, in absolute value, less than 40% of said second refractive-index difference.

54. (Amended) A method for producing a single-mode optical fiber for use in a wavelength-division-multiplexing transmission system having carrier wavelengths in an extended wavelength range, comprising:

producing a preform having

an inner core region with a first refractive-index difference;

a first layer radially surrounding the inner core region along the length of the preform and having a second refractive-index difference of less than zero;

a second layer radially surrounding the first layer along the length of the preform and having a third refractive-index difference;

a third layer radially surrounding and adjacent to the second layer along the length of the preform and having a fourth refractive-index difference of greater than zero; and

a glass cladding surrounding the core region and having a refractive-index difference substantially equal to zero; and

drawing said preform,

wherein the step of producing a preform comprises:

selecting said third refractive-index difference to be, in absolute value, less than 40% of said second refractive-index difference; and

selecting a width of said second layer in the preform so that a corresponding layer in the drawn fiber has a width in the range of 1-5 μm .

56. (Amended) The method according to claim 54, wherein the step of producing a preform comprises selecting a width of said second layer in the preform so that a corresponding layer in the drawn fiber has a width in the range of 2-4 μm .

61. (Amended) The fiber according to claim 59, wherein the fiber has a dispersion value of at least 1.5 ps/nm/km over a wavelength range of about 1530-1650 nm.

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68. (New) A single-mode optical transmission fiber, comprising:

a glass core having a central cross-sectional area with a first refractive-index peak, an outside ring with a second refractive-index peak, and an intermediate region between the first peak and the second peak with a refractive-index lower than the first and the second refractive index peak; and

a glass cladding surrounding the glass core, wherein the fiber has a cable cutoff wavelength of less than 1400 nm, an effective area of greater than or equal to $50 \mu\text{m}^2$, a dispersion at 1450 nm of greater than or equal to 1.5 ps/nm/km and a dispersion slope at 1550 nm of less than or equal to 0.070 ps/nm²/km.

69. (New) A single-mode optical transmission fiber according to claim 68, wherein the intermediate region includes a refractive index depression.

IN THE DRAWINGS:

Please amend Figures 5 and 12 by adding the caption "(Prior Art)" as indicated in red in the marked up copy of the drawings attached to the enclosed Request for Approval of Drawing Change. The Applicant respectfully requests the Examiner's acceptance of the proposed drawing revisions. No new matter has been added by this proposed amendment.

REMARKS

Claims 35-67 are pending in the application, of which claims 35, 54, and 59 are independent. In the Official Action of November 8, 2002, the Examiner allowed claims 59-67 and indicated that claims 36-37, 39, 41, 44, 46-50, 52-53, 55, and 57-58 would be allowable if written in independent form. The Examiner objected to the drawings and

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